

## REMARKS

Claims 1, 2, and 6-25 are pending in this application.

Claims 3-5 have been canceled.

Claims 1 and 16 are amended to specify that the slurry consists essentially of a liquid reducing metal and metal particulates and salt particulates. Claim 1 has also been amended to incorporate the limitations of canceled dependent claims 3-5. Claim 16 has additionally been amended to clarify that the molten salt in the vessel is separately prepared - this limitation is supported by the example in the paragraph bridging pages 4 and 5, which clearly describes adding the slurry to a separately prepared molten salt (i.e., not derived from the slurry itself) already present in the vessel.

No new matter is added by these amendments.

### Claim Rejections - 35 U.S.C. § 103(a)

Claims 1, 2, and 6-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Armstrong et al. U.S. Patent No. 5,958,106 in view of the Keller et al. U.S. Patent No. 2,846,303. These rejections are traversed. In order to establish a *prima facie* case for obviousness, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 USPQ 580 (CCPA 1974). Additionally, "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

The processes of the present invention start with metal *and* salt particles dispersed in

liquid reducing metal. In claims 1, 2, and 6-15, some of the reducing metal is removed to initially concentrate the particles. Next, an amount of the liquid reducing metal or an amount of a molten salt is passed through the concentrated particles at a temperature greater than the melting point of the salt particles. This dissolves or displaces the salt from the metal particles. The claimed steps of prior partial concentration of the slurry, and passing a hot stream of reducing metal or molten salt through the concentrate to dissolve or displace the salt particles from the metal particles, are not described in either the '106 patent or the '303 patent.

The process of the '303 patent differs significantly from the processes of the present claims in that it involves reacting a metal halide with a reducing metal at a temperature at which the salt byproduct of the reaction is molten (see e.g., FIG. 1). Thus, the slurry produced by the process of the '303 patent is a slurry of titanium particles dispersed in molten salt and liquid reducing metal (e.g., sodium), not metal particles *and* salt particles dispersed in liquid reducing metal as in the present claims.

With particular respect to claim 2, neither the '106 patent nor the '303 patent teaches or suggests the step of forming a gel of metal particles during an initial concentration step, much less passing a liquid metal or molten salt through the gel at a temperature greater than the melting point of the salt particles in the slurry to dissolve or displace the salt from the metal particles.

Accordingly, the combination of the applied references fails to teach or suggest all of the limitations of claims 1, 2, and 6-15 (i.e., the pre-concentration step and the step of passing the hot reducing metal or molten salt through the preconcentrated slurry are not taught). As such, a

*prima facie* case for obviousness has not been established. Nor is there any indication as to why one of ordinary skill in the art would have been motivated to modify both prior art processes to add the missing steps to arrive at the presently claimed process.

The process of claims 16-25 involves adding a slurry consisting essentially of a liquid reducing metal, metal particles, and salt particles to a separately prepared molten salt in a vessel to form layers due to density differences between the molten salt, the metal particles, and the reducing metal, and then removing liquid reducing metal from the vessel and concentrating and filtering the metal particles. The '106 patent does not teach or suggest adding a slurry from the Armstrong process to a molten salt at all.

As noted above, the '303 patent does not teach or suggest a slurry that includes both salt particles and metal particles; i.e., the salt in the '303 patent is molten, not particulate. In addition, the '303 patent does not teach or suggest adding a slurry of metal particles and salt particles to an additional amount of a separately prepared molten salt that is already present in a vessel. In the '303 patent, any molten salt that is present in the separation vessel was already present in the slurry itself, and does not come from a separately prepared molten salt, as in the present claims. There is nothing in either applied reference that would have motivated one of ordinary skill in the art to modify both the '106 patent and the '303 patent processes by adding the missing steps to arrive at the process of claims 16-25. Thus, again, a *prima facie* case for obviousness has not been established.

In view of the foregoing, Applicants deem claims 1, 2, and 6-25 to be in form for allowance. Reconsideration and early allowance of the present claims is solicited. In the event the foregoing is deemed unpersuasive, Applicants request entry of this amendment so as to place the claims in better form for appeal.

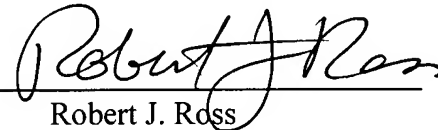
Respectfully submitted,

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